

MEASURES OF THE SOFT X-RAY EXCESS AS AN EIGENVECTOR 1 PARAMETER FOR ACTIVE GALACTIC NUCLEI

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We present a preliminary analysis of X-ray spectra of quasars in the context of the 4D Eigenvector 1 parameter space (Sulentic et al. 2000). 4DE1 serves as a surrogate H-R diagram for representing empirical diversity among quasars and identifying the physical drivers of the diversity. The soft X-ray spectral index (Γ_{soft}) was adopted as one of the 4DE1 correlates for contrasting extremes in Type 1 properties. 4DE1 motivated the hypothesis of two quasar populations (A and B) representing sources radiating at $L/L_{EDD} > 0.2$ and $L/L_{EDD} < 0.1$ respectively. Pop A is a largely radio-quiet population with FWHM $H\beta < 4000$ km/s and often showing a soft X-ray excess. Pop B is a mix of radio-quiet and the majority of RL quasars showing only a hard X-ray power-law SED. The X-ray separation was based upon earlier ROSAT and ASCA data but we now confirm this dichotomy with large samples of X-ray spectra obtained with XMM and SWIFT. One popular idea connects the soft excess in Pop A quasars as a signature of thermal emission from a hot accretion disk in sources radiating close to the Eddington limit.